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10/534,124

11/18/2005

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EXAMINER

GORDON, BRYAN P

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/534,124  
Filing Date: November 18, 2005  
Appellant(s): AMATO ET AL.

\_\_\_\_\_  
Mr. Anthony J. Canning  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 23 November 2009 appealing from the Office action mailed 29 April 2009.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

<b>4,013,552</b>	<b>Kreuter</b>	<b>3-1977</b>
<b>5,110,403</b>	<b>Ehlert</b>	<b>5-1992</b>

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

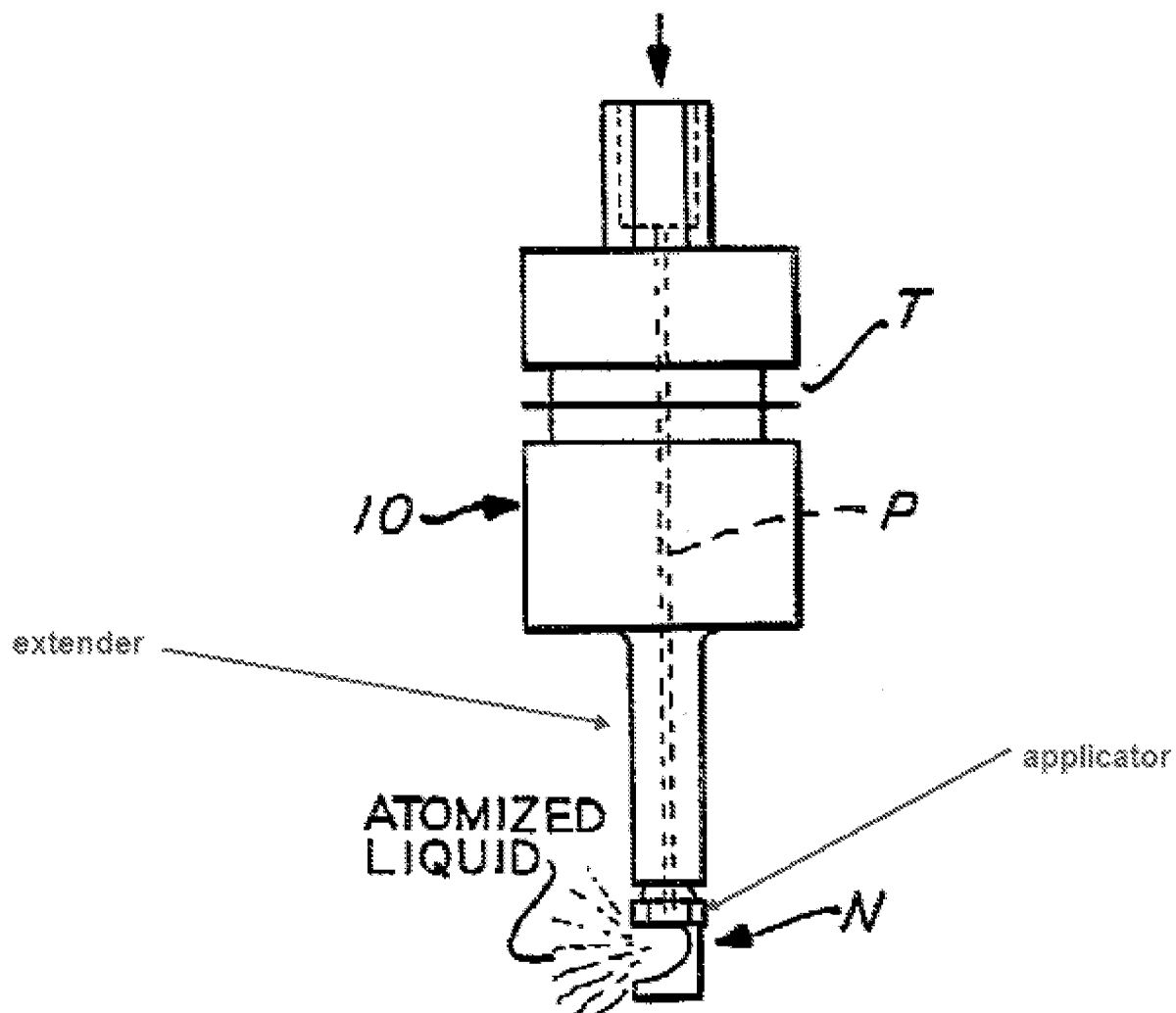
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreuter (US PN 4,013,552) and in view of Ehlert (US PN 5,110,403).



**Figure A**

Considering claim 1, Kreuter (Figure 4A) teaches a sewage slurry ultrasonic apparatus for applying ultrasonic energy to sewage slurry, the apparatus comprising: an applicator having an outwardly facing surface and an extender which extends from the outwardly facing surface.

However, Kreuter does not teach at least one booster.

In the same field of endeavor, Ehlert (Figure 6) teaches at least one booster (601). It would be obvious to have a booster combined with Kreuter's device since it is well known in the art that horns consist of a booster to amplify the ultrasonic energy. Therefore, the device consisting of an applicator, extender and booster would be integrally formed.

Considering claim 2, Ehlert (Figure 2) teaches wherein the applicator has a central aperture defined by an inwardly facing surface (203).

Considering claim 3, Ehlert teaches wherein the inwardly facing surface oscillates when ultrasonic energy is applied to the apparatus. It would be obvious to one of ordinary skill in the art that Ehlert's device vibrates when power is supplied.

Considering claim 4, the method of forming the integral applicator, extender and booster are not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Considering claim 5, Kreuter discloses the claimed invention except for the integral applicator, extender and booster are formed from metal. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the integral applicator, extender and booster are formed from metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Considering claim 6, Kreuter discloses the claimed invention except for wherein the metal is an alloy. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the metal as an alloy, since it has been held

to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Considering claim 7, Kreuter discloses the claimed invention except for wherein the alloy is a titanium-containing alloy. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an alloy is a titanium-containing alloy, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Considering claim 8, Kreuter discloses the claimed invention except for wherein the alloy is a titanium aluminum-containing alloy. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an alloy is a titanium aluminum-containing alloy, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Considering claim 9, Kreuter discloses the claimed invention except for the titanium, aluminum and vanadium in a molar ratio of 6:4:1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a molar ration of 6:4:1, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.



**(10) Response to Argument**

Regarding the argument that the appellant's invention provides unexpected advantages, such as longevity and reduced servicing requirements, over the prior art the examiner is not persuaded. The appellant argues that their invention benefits in terms of longevity and reduced servicing requirements which significantly outweighed the loss of design and operational flexibility associated with forming the components. However, those advantages are not unexpected as the appellant states. Forming an ultrasonic horn from one piece rather than three separate parts does not provide unexpected benefits. It would have been expected that if the ultrasonic horn was made from one piece instead of multiple parts there would be no discontinuities between the parts which would lead to less chance that the ultrasonic horn would fail when it is vibrated. That is not something unexpected to one of ordinary skill in the art. Furthermore, the structure of the appellant's case is no different than the examiner's combined prior art. When combined together the prior art does form an ultrasonic horn with an applicator, extender and booster. That is the same structure as the appellant's. Furthermore, Kreuter might not teach that the parts could be integrally formed as the applicants meaning of integrally formed, but not claimed, but as *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893) states forming one piece of an article which has formerly been formed by two pieces and put together involves only routine skill in the art. Therefore, Kreuter does provide evidence that the components could be integrally formed as cited by *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). Finally it

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would have be obvious to one of ordinary skill in the art at the time the invention was made to integrally from the applicator and extender with the booster of Ehlert since adding a booster would help amplify the ultrasonic energy and as stated by *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893) forming in one piece an article which has formerly been formed by two pieces and put together involves only routine skill in the art.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Bryan P Gordon/

Examiner, Art Unit 2834

Conferees:

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Brian Sircus  
TQAS, TC2800

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Supervisory Patent Examiner, Art Unit 2837

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